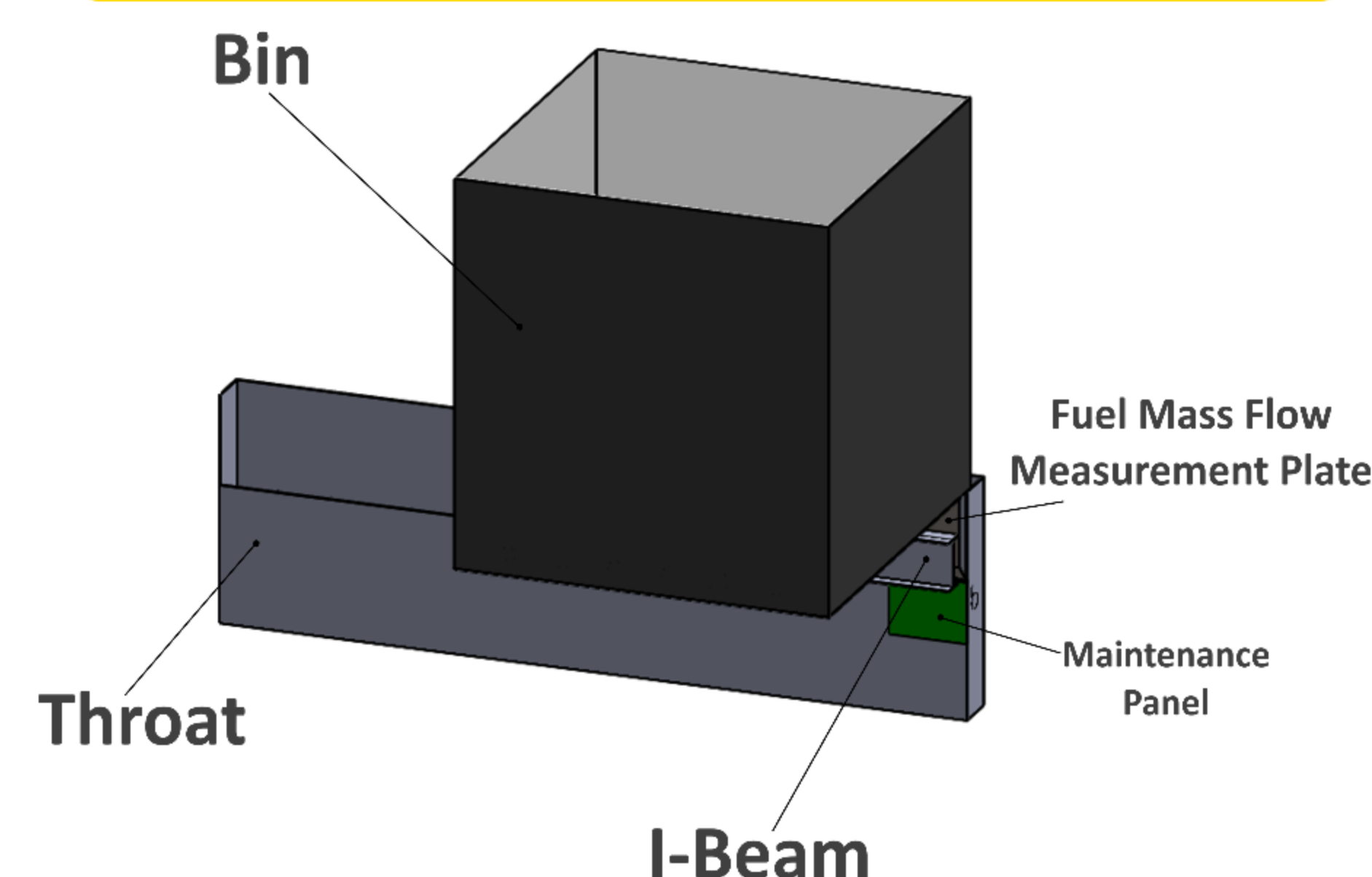


As of 2018, the woodchip boiler consumes approximately \$1,000,000 per year in fuel. This is a significant savings over alternative fuels but could be further improved by implementing measurement systems to more efficiently supply fuel.

Implementing a fuel mass flow system could result in a 5-15% reduction in fuel usage. This reduction could decrease operating costs and improve Moscow air quality.

Steam Plant Layout

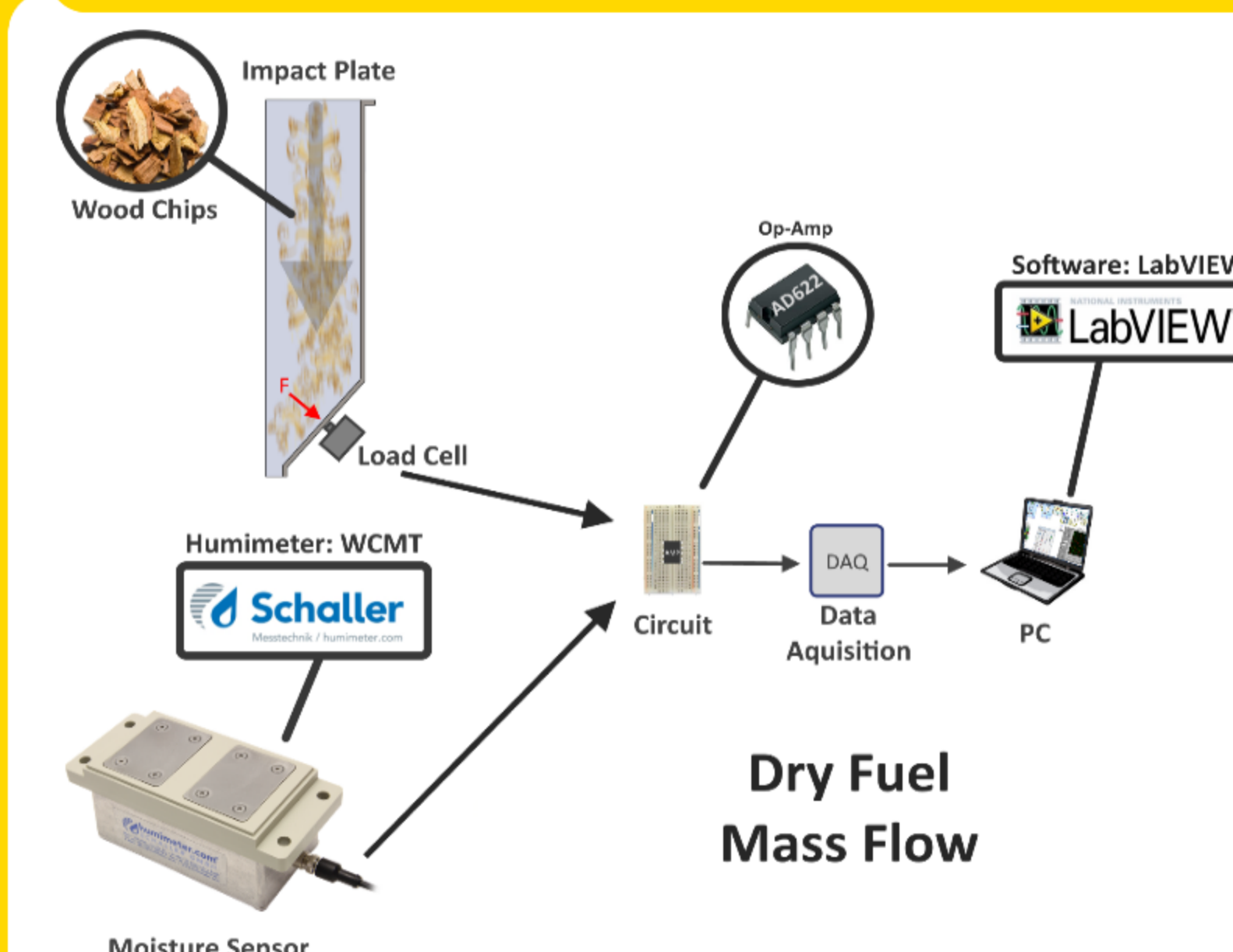


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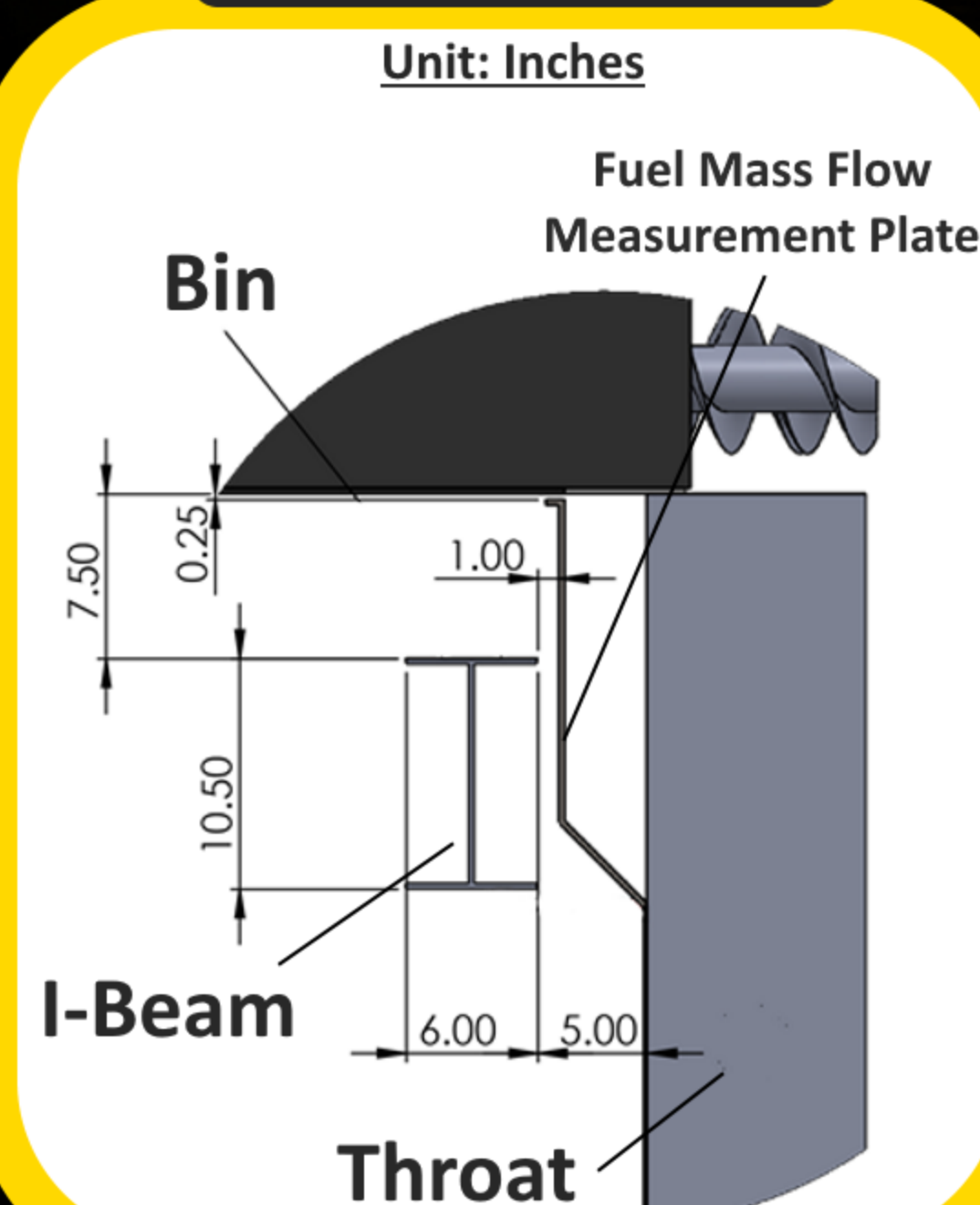
Fuel Mass Flow Prototype



System Diagram



Proposed Measurement Plate



Design Restrictions

Limited space

Risk of bin fires

Abrasive environment

Using a moisture sensor we are able to separate the mass of water from the mass of dry fuel.

Lab Test: Wood Chip Impacts

